

2. (b) $\sigma_2(t)$ inside the integral

3. (b) PDE from 3(a) + Boundary Conditions

→ $f(T, x, y) = ?$

$f(t, x, y) = ?$ when $x=0, y=0$

3. (c) Almost the same with Thm 8.4.

2. (a) • $C = C(t, x)$ satisfies Black-Scholes PDE
with $\sigma = \sigma_1$

• when computing $dS_t, d\langle S, S \rangle_t,$
use $\sigma = \sigma_2$